IF IT CAN POWER A CAR, WHY NOT A DATA CENTER?

Second-Life EV Batteries & the Circular Economy

DISCOVER

How retired EV batteries can be reused.

EVALUATE

Business opportunity, risk and viability.

RECOMMEND

Choose a customer and design a pilot.

Lesson Objectives

By the end of the session, you will be able to…

Explain why an EV battery can become unsuitable for a car while remaining useful for stationary storage.

Use ten high-value business-English words and collocations.

Discuss real examples of second-life battery applications.

Evaluate commercial opportunities alongside safety, regulatory and environmental risks.

Recommend a responsible strategy for scaling battery reuse.

Warm-up: When Is a Product 'Finished?'

Think beyond batteries.

TECHNOLOGY

When a device becomes obsolete, can its components still have value?

BUSINESS

When should a company repair, reuse, repurpose or replace a product?

CIRCULAR ECONOMY

What does it mean to give a product a 'second life'?

1-TO-1 CHALLENGE

Give one example from technology, clothing, packaging or vehicles.

Article Connection

A battery can lose driving performance without becoming useless.

WHY REUSE?

The article explains that large lithium-ion batteries gradually lose capacity. Around 70–80% of original charge may no longer provide enough driving range, but remaining energy can still be useful in buildings or industrial settings.

POSSIBLE APPLICATIONS

- Homes with solar panels
- Factory forklifts
- Stadium backup power
- Airport charging
- Data-centre storage
- Local microgrids

CENTRAL QUESTION

Can second-life batteries become safe, reliable and profitable?

Real-World Examples

Use the examples to practise comparing opportunities.

HOME

Retired Renault batteries + solar panels

FACTORY

Retired Audi batteries used in forklifts

STADIUM

Nissan battery storage at Johan Cruijff Arena

AIRPORT

Moment Energy / Vancouver airport charging

DATA CENTRE

Redwood Materials and used Rivian batteries

MICROGRID

Nevada microgrid for data-centre power

B2 Vocabulary: The 10 Key Terms

Classify each as technical, commercial, legal, environmental or operational.

REPURPOSE
use again for a new purpose

CAPACITY
amount that can be stored/produced

SECOND LIFE
later useful service

BACKUP
replacement/additional system

MICROGRID
local electricity network

OUTAGE
temporary service interruption

SCALE
expand successfully

LIABILITY
legal responsibility

VIABILITY
likelihood of business success

PRODUCER RESPONSIBILITY
manufacturer responsibility after sale

Vocabulary in Action

Choose three terms. Explain a real business implication.

SCENARIO

Your company has access to 500 retired EV batteries.

You are considering a second-life storage business.

TASK 1

Choose three target words.

TASK 2

Explain what each means for the business.

TASK 3

Use one word to describe a major risk.

Commercial Opportunity: Choose Your Market

Which customer should come first?

HOMEOWNERS

Solar panels
Backup power
Individual customers

FACTORIES

Backup power
Technical teams
Operational continuity

AIRPORTS

Charging infrastructure
High demand
Complex operations

DATA CENTRES

Huge electricity demand
High technical requirements

QUESTION

Which market offers the strongest first opportunity — and why?

1-to-1 Speaking: Challenge the Business Case

Give an answer, then defend it against follow-up questions.

QUESTION 1

Why is this market more promising than the alternatives?

QUESTION 2

What information would you need before investing?

QUESTION 3

Who would pay for the solution?

QUESTION 4

What could go wrong?

QUESTION 5

How would you build customer trust?

Risk, Regulation & Responsibility

A promising idea is not automatically a safe or sustainable business.

SAFETY

- Fire risk
- Testing
- Battery management
- Installation standards

LIABILITY

- Who is responsible?
- Manufacturer
- Reuse company
- Customer
- Regulator

SUSTAINABILITY

- Transport
- Electricity source
- Reuse vs recycling
- End-of-life management

DISCUSSION

Which risk would you address before anything else?

Functional Language

Use these structures to sound precise and strategic.

COMMERCIAL POTENTIAL

“The most promising application appears to be ___ because ___.”
“The business case is attractive if the company can control ___.”

RISK & UNCERTAINTY

“The main risk is that ___.”
“Before scaling the project, the company would need to verify ___.”

PILOT

“I would begin with a small pilot involving ___.”
“The pilot should test safety, reliability, remaining capacity and total cost.”

REGULATION

“Regulation can build customer trust, but excessive regulation may slow innovation.”
“Liability should be clearly assigned…”

Mini Case: Choosing the First Market

You are advising a start-up with limited capital.

SITUATION

The start-up has retired EV batteries and wants a first customer that can pay for a pilot, provide useful performance data and accept technical supervision.

Choose: homeowners • factories • airports • data centres.

Explain the customer problem.

Explain why your market is better than the alternatives.

Identify technical, safety and liability requirements.

Define what the pilot should measure.

Build the Pilot

Turn your recommendation into a testable business plan.

CUSTOMER

Who is the first customer?

USE CASE

What problem are you solving?

TEST

What must the pilot measure?

RISK

What could make it fail?

SUCCESS

What evidence would justify scaling?

Executive Recommendation

Deliver a 45-second recommendation to the investor.

1. RECOMMEND

Choose one market.

2. JUSTIFY

Give two reasons and one commercial benefit.

3. PROTECT

Name two risks and explain the pilot.

LANGUAGE TARGET

Use at least 5 target vocabulary items.

Feedback & Upgrade

Make your recommendation more convincing.

Add evidence: “What would you need to verify?”

Add a trade-off: “The advantage is…, however…”

Add responsibility: “Liability should be…”

Add a measurable success criterion.

Add a scaling condition: “If the results are positive…”

Final Reflection

Complete the sentence — then expand it.

YOUR ANSWER

“The most promising second-life use for EV batteries is _____ because _____, but the main barrier is _____.”

EXTEND

Add one risk + one recommendation for a pilot.

LESSON COMPLETE

Repurpose. Evaluate. Pilot. Scale responsibly.